SOP-39310129-KF-E1

Rev. 1.0

Ka Band Phase Locked Oscillator, 39.2 GHz, Externally Referenced

Description:

Model SOP-39310129-KF-E1 is a phase locked oscillator with a typical output frequency of 39.2 GHz and a minimum output power of +29 dBm. The phase noise is proportional to the phase noise of the external reference specified in the electrical specifications below. The oscillator has a maximum harmonic suppression of -20 dBc and spurious of -70 dBc. The oscillator requires a 100 MHz reference at +0 dBm typical. The power supply is +12 V_{DC}/1.7 A.

Features:

- High Output Power
- Low Phase Noise
- Low Harmonic Components

Applications:

- Radar Systems
- Communication Links
- Transmitters and Receivers

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency		39.2 GHz	
Output Power	+29 dBm		
Phase Noise	Reference Noise + 20*log(N) + 3 dB		
Harmonic Suppression			-20 dBc
Spurious			-70 dBc
External Reference Frequency		100 MHz	
External Reference Input Power		+0 dBm	
DC Voltage		+12 V_{DC}	
DC Supply Current		1.7 A	
Lock	TTL “1”		
Unlock	TTL “0”		
Frequency Stability (Externally Referenced)	Same as reference		
Frequency Stability (Internally Referenced)			±5 ppm
Power Stability			±1 dB
Operating Temperature	0˚C		+50˚C

Mechanical Specifications:

Item	Specification
Output	K (F)
Bias	Solder Pin
Size	2.25” (W) 2.25” (L) X 1.25” (H)
Case Material	Aluminum
Finish	Nickel Plated
Outline	OP-EA-P1

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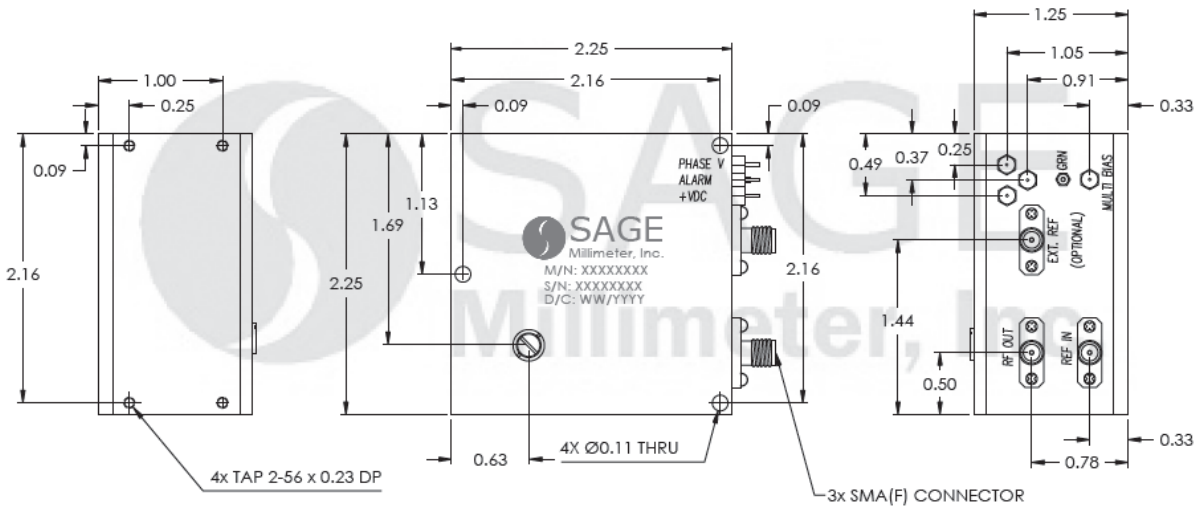
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



Note:

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model number.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed **+50˚C**. Use additional heatsink or fan if necessary.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**